

CLAIMS

What is claimed is:

- 1 1. A universal power supply, comprising:
2 a power control unit including a voltage adjustment component, a current
3 regulation component, and a controller that is configured to read data from a
4 consumer appliance and determine a voltage requirement and an amperage tolerance
5 of the consumer appliance, the controller further being configured to control the
6 voltage adjustment component and the current regulation component so as to supply a
7 required voltage that does not exceed the amperage tolerance of the consumer
8 appliance.

- 1 2. The supply of claim 1, wherein the voltage adjustment component
2 converts alternating current (AC) voltage from a power source to direct current (DC)
3 power.

- 1 3. The supply of claim 2, wherein the voltage adjustment component is
2 configured to control the DC voltage supplied to the consumer appliance.

- 1 4. The supply of claim 1, wherein the current regulation component is
2 configured to control the current supplied to the consumer appliance.

- 1 5. The supply of claim 1, further comprising a cord that is adapted to
2 connect the power control unit to a power source.

1 6. The supply of claim 1, further comprising a cord that is adapted to
2 connect the power control unit to the consumer appliance.

1 7. The supply of claim 6, wherein the cord comprises an appliance
2 connector that is adapted to connect to a mating connector of the consumer appliance.

1 8. The supply of claim 7, wherein the cord comprises a positive
2 conductor, a ground conductor, and a data conductor.

1 9. The supply of claim 8, wherein the data conductor is configured to
2 connect with a memory element of the consumer appliance.

1 10. The supply of claim 1, further comprising a controller power supply
2 that supplies direct current (DC) power to the controller.

1 11. A universal power supply for supplying power to a consumer
2 appliance, the supply comprising:

3 a power control unit including a voltage adjustment component, a current
4 regulation component, and a controller that is configured to read data from a
5 consumer appliance and determine a voltage requirement and an amperage tolerance
6 of the consumer appliance, the controller further being configured to control the
7 voltage adjustment component and the current regulation component so as to supply a
8 required voltage that does not exceed the amperage tolerance of the consumer
9 appliance;

10 a first cord that is adapted to connect the power control unit to a power source;

11 and

12 a second cord that is adapted to connect the power control unit to the
13 consumer appliance.

1 12. The supply of claim 11, wherein the voltage adjustment component
2 converts alternating current (AC) voltage from the power source to direct current
3 (DC) power.

1 13. The supply of claim 12, wherein the voltage adjustment component is
2 configured to control the DC voltage supplied to the consumer appliance.

1 14. The supply of claim 11, wherein the current regulation component is
2 configured to control the current supplied to the consumer appliance.

1 15. The supply of claim 14, wherein the second cord comprises an
2 appliance connector that is adapted to connect to a mating connector of the consumer
3 appliance.

1 16. The supply of claim 15, wherein the second cord comprises a positive
2 conductor, a ground conductor, and only one data conductor.

1 17. The supply of claim 16, wherein the data conductor is configured to
2 connect with a memory element of the consumer appliance.

1 18. The supply of claim 11, further comprising a controller power supply
2 that supplies direct current (DC) power to the controller.

1 19. A controller for use in a universal power supply, the controller
2 comprising:

3 logic configured to read data from a consumer appliance and determine a
4 voltage requirement and an amperage tolerance of the consumer appliance; and

5 logic configured to control a voltage adjustment component and a current
6 regulation component so as to supply a required voltage that does not exceed the
7 amperage tolerance of the consumer appliance.

1 20. The controller of claim 19, wherein the logic configured to read data
2 comprises logic configured to read data from a passive memory element of the
3 consumer appliance, the passive memory element comprising data that identifies a
4 voltage requirement and an amperage tolerance.

1 21. The controller of claim 19, further comprising logic configured to
2 detect connection with the consumer appliance.

1 22. A method for supplying power to a consumer appliance, the method
2 comprising:

3 detecting connection of a power supply with a consumer appliance;
4 reading data stored in a memory element of the consumer appliance;
5 determining a voltage requirement and an amperage tolerance of the consumer
6 appliance; and
7 controlling the power supply so as to provide the required voltage at an
8 amperage that does not exceed the amperage tolerance to the consumer appliance.

1 23. The method of claim 22, wherein detecting connection comprises
2 providing a voltage to the memory element and detecting an impedance current
3 variation.

1 24. The method of claim 22, wherein reading data comprises reading two
2 bytes of data, a first byte comprising a voltage requirement for the consumer
3 appliance and a second byte comprising an amperage tolerance for the consumer
4 appliance.

1 25. The method of claim 22, wherein controlling the power supply
2 comprises controlling a voltage adjustment component and a current regulation
3 component of the power supply.

1 26. A system for supplying power to a consumer appliance, the system
2 comprising:

3 means for detecting connection of a power supply to a consumer appliance;

4 means for determining a voltage requirement and an amperage tolerance of the
5 consumer appliance; and

6 means for automatically controlling the power supply so as to provide the
7 required voltage at an amperage that does not exceed the amperage tolerance to the
8 consumer appliance.

1 27. The system of claim 26, wherein the means for detecting connection
2 comprise means for providing a voltage to a memory element of the consumer
3 appliance and means for detecting an impedance current variation.

1 28. The system of claim 26, wherein the means for determining comprise
2 means for reading a memory element of the consumer appliance.

1 29. The system of claim 28, wherein the means for determining further
2 comprise means for reading two bytes of data from the memory element, a first byte
3 comprising a voltage requirement for the consumer appliance and a second byte
4 comprising an amperage tolerance for the consumer appliance.

1 30. The system of claim 26, wherein the means for controlling the power
2 supply comprise a voltage adjustment component and a current regulation component
3 of the power supply.

1 31. A system stored on a computer-readable medium, comprising:
2 logic configured to read data from a consumer appliance and determine a
3 voltage requirement and an amperage tolerance of the consumer appliance from that
4 data; and
5 logic configured to control a power supply so as to provide a required voltage
6 at an amperage that does not exceed the amperage tolerance to the consumer
7 appliance.

1 32. The system of claim 31, wherein the logic configured to read data
2 comprises logic configured to read data from a passive memory element of the
3 consumer appliance, the passive memory element comprising data that identifies a
4 voltage requirement and an amperage tolerance.

1 33. The system of claim 31, further comprising logic configured to detect
2 connection to the consumer appliance.